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NATIONAL RECOVERY ADMINISTRATION

DIVISION OF REVIEW

EVIDENCE STUDY

NO. 29

OF

PHOTO ENGRAVING INDUSTRY

Prepared by

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PRELIMINARY DRAFT

(NOT FOR RELEASE: FOR USE IN DIVISION ONLY)

THE EVIDENCE STUDY SERIES

The EVIDENCE STUDIES were originally planned as a means of gathering evidence bearing upon various legal issues which arose under the National Industrial Recovery Act.

These studies have value quite aside from the use for which they were originally intended. Accordingly, they are now made available for confidential use within the Division of Review, and for inclusion in Code Histories.

The full list of the Evidence Studies is as follows:

- | | |
|-------------------------------------|---|
| 1. Automobile Manufacturing Ind. | 23. Mason Contractors Industry |
| 2. Boot and Shoe Mfg. Ind. | 24. Men's Clothing Industry |
| 3. Bottled Soft Drink Ind. | 25. Motion Picture Industry |
| 4. Builders' Supplies Ind. | 26. Motor Bus Mfg. Industry (Dropped) |
| 5. Chemical Mfg. Ind. | 27. Needlework Ind. of Puerto Rico |
| 6. Cigar Mfg. Industry | 28. Painting & Paperhanging & Decorating |
| 7. Construction Industry | 29. Photo Engraving Industry |
| 8. Cotton Garment Industry | 30. Plumbing Contracting Industry |
| 9. Dress Mfg. Ind. | 31. Retail Food (See No. 42) |
| 10. Electrical Contracting Ind. | 32. Retail Lumber Industry |
| 11. Electrical Mfg. Ind. | 33. Retail Solid Fuel (Dropped) |
| 12. Fab. Metal Prod. Mfg., etc. | 34. Retail Trade Industry |
| 13. Fishery Industry | 35. Rubber Mfg. Ind. |
| 14. Furniture Mfg. Ind. | 36. Rubber Tire Mfg. Ind. |
| 15. General Contractors Ind. | 37. Silk Textile Ind. |
| 16. Graphic Arts Ind. | 38. Structural Clay Products Ind. |
| 17. Gray Iron Foundry Ind. | 39. Throwing Industry |
| 18. Hosiery Ind. | 40. Trucking Industry |
| 19. Infant's & Children's Wear Ind. | 41. Waste Materials Ind. |
| 20. Iron and Steel Ind. | 42. Wholesale & Retail Food Ind. (See No. 31) |
| 21. Leather | 43. Wholesale Fresh Fruit & Veg. |
| 22. Lumber & Timber Prod. Ind. | |

In addition to the studies brought to completion, certain materials have been assembled for other industries. These MATERIALS are included in the series and are also made available for confidential use within the Division of Review and for inclusion in Code Histories, as follows:

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|------------------------------------|---|
| 44. Wool Textile Industry | 49. Household Goods & Storage, etc. (Dropped) |
| 45. Automotive Parts & Equip. Ind. | 50. Motor Vehicle Retailing Trade Ind. |
| 46. Baking Industry | 51. Retail Tire & Battery Trade Ind. |
| 47. Canning Industry | 52. Ship & Boat Bldg. & Repairing Ind. |
| 48. Coat and Suit Ind. | 53. Wholesaling or Distributing Trade |

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Foreword

In the preparation of this Evidence Study of the Photo-Engraving Industry, numerous sources have been consulted in the endeavor to assemble the desired information. The sources used have, as a rule, been indicated in the text of the Study or in footnotes. The sources relied upon most extensively, as will be seen, were the Transcript of Hearings on the proposed Code of Fair Competition of the Photo-Engraving Industry, the Bureau of the Census (Census of Manufactures, Report on Photo-Engraving), and data assembled by the staff of the American Photo-Engravers' Association, the trade association of the Industry, and published in various issues of the trade publication, the Photo-Engravers' Bulletin.

The Census of Manufactures has certain definite limitations so far as this Study is concerned. First, the latest report is for the year 1933. The data from this source, therefore, do not cover any period of Code operation. Second, it excludes all establishments whose gross annual volume of business is valued at less than \$5,000, whereas "all plants engaged in the production or partial production of photo-engraved plates" were included in the Code definition. The data taken from the Photo-Engravers' Bulletin, while not always comparable with those of the Census of Manufactures, nevertheless, give not only a wider coverage in certain respects, but also cover most of the period of Code operation and, therefore, provide a basis for determining some of the effects of the Code.

Unfortunately, some of the questions upon which evidence was sought in the Study Outline could not be answered as fully or definitely as the writer would have liked. On certain phases of the Study the data in our files were very meagre and, under the circumstances, it was deemed unwise to consult either members of the Industry or the Code Authority for fuller information.

CHAPTER I

THE NATURE OF THE INDUSTRY

Code Definition

According to the Code of Fair Competition for the Photo-Engraving Industry which was approved by the President December 23, 1933,

"the term 'photo-engraving industry' as used herein includes all plants engaged in the production or partial production of photo-engraved plates for sale or for the use and benefit of others than the person, firm, or corporation that produces such plates, and all persons, firms, or corporations that purchase photo-engraved plates for the purposes of resale."

Description of the Industry

Photo-engraving is a reproductive art, which involves the use of a photo-mechanical process by which relief printing blocks or plates are produced in line and half-tone. It is widely used today in the commercial world for the reproduction of artistic designs, such as magazine covers, illustrations, greeting cards, half-tone engravings, and other works of art. Photo-engraved plates are also used outside the Graphic Arts Industries in the manufacture of such products as wallpaper, carpets, linoleum, cotton goods, silk goods, steel products in imitation of wood, chinaware, and shoes.

Establishments within the Photo-Engraving Industry engage primarily in the making of photo-engraved plates for use by members of other industries in the reproduction of designs of an artistic nature, such as those mentioned above, and do not ordinarily print from the plates which they themselves make.

History

The art of photo-engraving, like every other art, has undergone an evolutionary development. 1/ Its origin can be traced to experiments in England, France, and Germany in the early second half of the 19th century. The invention of the half-tone process is attributed to a German, George Meisenbach, who patented it in 1832 and was the first to apply it on a practical basis. The invention of the process most widely used today, however, is accredited to an American, Frederick Ives, who was producing commendable photo-engraving by the year 1886.

From these simple beginnings a little over a half century ago photo-engraving has developed into a large industry, comprising approximately 800

1/ For historical account, see Encyclopedia Britannica 14th ed., Article Photo-Engraving.

individual establishments which do an annual volume of business of about \$20,000,000 in normal times. 1/

Number of Members

There are few branch plants in the Photo-Engraving Industry, consequently the number of members of the Industry is approximately the same as the total number of establishments.

Number of Establishments

The total number of establishments in the Industry, including a considerable proportion of very small plants not assessed for Code Authority expenditures, on January 1, 1935, was 377, according to a report submitted by the Code Authority for the Industry on January 22. Table IV shows a net gain of 14 establishments at the end of 1934 over 1933. The number listed for budgetary assessment by the Code Authority on January 22, 1935, as well as on January 1, 1934, the effective date of the Code, was 796. The number of establishments assessed by the Code Authority is 30 more than the number given in the Code Application (See Table I, below) and 190 more than the number reported by the Census of Manufactures for the year 1933 (See Table II), the only year for which comparable statistics are available.

The discrepancy in the number of establishments given by the three sources is not difficult to explain. The Code Application was filed on August 15, 1933, and the number of establishments given was clearly recognized as an approximation. The Census of Manufactures excludes all establishments whose annual gross scale volume of business is valued at less than \$5,000, whereas the other two sources undertake to cover the entire Industry as defined by the Code, that is, "all plants engaged in the production or partial production of photo-engraved plates for sale or for the use and benefit of others than the person, firm, or corporation that produces such plates." Since the Photo-Engraving Industry is comprised to a large degree of small plants, many of these automatically fall into the category of those not tabulated by the Census Bureau. The percentage of those falling into this category during the period covered by the 1933 census appears to have been quite large.

None of these sources include "private plants," that is, Photo-Engraving plants operated by private printing establishments, such as those of leading daily newspapers, periodicals, etc., which produce photo-engravings for their own use, but not, as a rule, for sale.

1/ See testimony in transcript of Code Hearings on the Printing Industry, (Sept. 21, 1933), Vol. 3, Page 995.

Table I

NUMBER OF CONCERNS

Year	Number of Con- cerns
1928	727
1930	725
1932	735
1933	766

Source: NRA Code Application

Geographical Concentration

The Photo-Engraving establishments which comprise the Industry are to be found in 232 cities and towns scattered throughout the country. In spite of this fact however, photo-engraving is considered a large-city industry. The plants located in 8 large cities, such as Boston, New York, Philadelphia, Chicago, and Los Angeles, which constitute only about 30 per cent ^{1/} of the total number, account for the greater volume of business of the Industry. Most of the employees of the Industry are also located in the large cities.

Geographical Distribution

The members of the Industry are widely distributed over the country, with at least one establishment in practically every state.

^{1/} See Transcript of Hearings on the Printing Industry, Volume 3, September 1933, page 1020.

The number of establishments by states is shown in Table II.

Table II

NUMBER OF ESTABLISHMENTS, BY PRINCIPAL STATES a/

State	1929	1931	1933
U. S. Total	654	617	600
Alabama	4	5	6
California	54	52	52
Connecticut	15	16	17
District of Columbia	7	7	7
Georgia	10	8	6
Illinois	37	53	52
Indiana	11	9	12
Iowa	3	8	8
Kentucky	6	7	6
Maine	5	6	5
Maryland	7	6	8
Massachusetts	44	42	43
Michigan	28	28	27
Minnesota	13	11	12
Missouri	24	20	20
New Jersey	10	9	6
New York	116	109	104
North Carolina	7	6	5
Ohio	54	52	53
Oklahoma	3	5	5
Oregon	10	9	7
Pennsylvania	44	41	41
Tennessee	8	7	9
Texas	15	18	15
Virginia	8	7	7
Washington	13	14	13
Wisconsin	19	16	16
Other States	48	46	38

Source: Census of Manufactures, "Photo-Engraving, Not Done in Printing Establishments."

a/ Establishments with products valued at less than \$5,000 per year not included.

Capital Investment

The capital investment of the Photo-Engraving Industry is estimated at approximately \$30,000,000 as will be seen from Code Application statistics, given below, which are the best available. The basis on which the capitalization was determined is not stated in any of the reports nor the NRA files. In spite of the adverse effect of the prolonged economic crisis upon sales values as shown below, the capitalization of the Industry has remained virtually unchanged since 1928; at least this was true down to the end of 1933, as will be seen from Table III, below. The statistics for 1934 have not as yet been compiled,

but it highly improbable, judging from statistics on other phases of the industry, that there was any considerable change in the capitalization of the industry in 1934.

Table III

CAPITAL INVESTMENT OF
THE PHOTO-ENGRAVING INDUSTRY

Year	Amount of Capital Invested
1928	\$30,711,518
1930	30,627,030
1932	30,727,000
1933	30,629,000

Source: NRA Code Application

Decline in Sales

The total dollar volume of business as reported by the Census of Manufactures declined from approximately \$77,000,000 in 1929 to \$37,000,000 in 1933, or about 52 per cent.

Failures

While there were, no doubt, failures in the Photo-Engraving Industry during the years 1929 to 1934, statistics as to the number of failures and the amount of the liabilities involved are not available. It will be noted, however, that according to the Census of Manufactures the total number of establishments had dwindled from 654 in 1929 to 600 in 1933. This shrinkage is explained in part by mergers. It is also possible that a larger number of establishments fell into the category of those doing a volume of business valued at less than \$5,000 annually during these years, and were thus eliminated from the Census tabulation.

Table IV shows the number of shops closed, whether through failure or otherwise, along with the number opened and the number merged during the years 1930 to 1934. It is interesting to note that the number of shops opened each year beginning with 1930 exceeded the number closed.

Table IV
NUMBER OF SHOPS OPENED, CLOSED, AND MERGED

Year	Number of Shops Opened	Number of Shops Closed	Number of Shops Merged
1930	25	19	17
1931	28	16	25
1932	36	20	13
1933	28	12	5
1934	22	8	None

Source: The Photo-Engravers Bulletin, (Published by The American Photo-Engravers Association, 166 West Van Buren St., Chicago, Ill.) September 1933 page 43 The American Photo-Engravers Association has its own statistical staff which compiles the statistical material presented in its publications.

Total Value of Products

The total dollar value of products of the Photo-Engraving Industry, exclusive of that done in printing establishments and in plants whose annual volume of business was less than \$5,000, is given in Table V, for the years 1929, 1931, and 1933.

Table V

VALUE OF PRODUCTS OF THE PHOTO-ENGRAVING INDUSTRY a/

Year	Value of Products
1929	\$77,382,000
1931	56,020,000
1933	37,583,000

Source: Census of Manufactures, "Photo-Engraving, Not Done In Printing Establishments."

a/ Does not include photo-engraving done in printing establishments, or the production of plants whose products were valued at less than \$5,000 for the year.

Average Costs of Photo-Engraved Plates

The Industry engages almost exclusively in the production of photo-engraved plates, which are sold to other industries, as already indicated. The average cost of these plates varies according to the kind of plate involved. The following table gives the average cost of various kinds of plates from 1929 to 1933.

Table VI

AVERAGE PLATE COSTS, BY KIND OF PLATE

Kind of Plate	1929	1930	1931	1932	1933
Square Half-tones	\$5.73	\$5.25	\$5.20	\$4.72	\$5.05
Zinc Etchings	4.23	3.99	4.08	3.89	4.16
Outlined and Vignetted					
Half-tones	7.39	6.55	6.80	6.44	6.72
Oval and Circle Half-tones	5.09	5.30	5.56	4.98	6.30
Zinc Half-tones	4.16	3.55	3.56	3.68	3.74
Combination Half-tone and					
Line	27.68	20.82	20.60	19.01	21.35
Ben Day Zincs	12.24	9.14	11.09	12.60	-
Line Etchings on Copper	7.75	7.64	8.70	6.59	6.68
Highlight Half-tones	-	10.82	19.30	22.41	26.67

Source: American Photo-Engravers Association, Photo-Engravers Bulletin, May 1934, page 9.

Competition

The Photo-Engraving Industry has no real competitor. However, there is considerable competition within the Industry, between members. Sales of photo-engraved plates are diminished somewhat through the operation, by certain business establishments, notably leading daily newspapers, of private photo-engraving plants in which they perform their own photo-engraving.

Industries Using Photo-Engraved Plates

Practically all photo-engraved plates are used outside of the Photo-Engraving Industry. These plates are sold not only to certain members of the Graphic Arts Industry, but also to several other industries, among which are the wall-paper, carpet, linoleum, cotton goods, silk goods, shoe, and chinaware industries.

CHAPTER II
LABOR STATISTICS

Wage Earners

The average number of wage earners in the Industry as reported by the Census Bureau for the years 1929, 1931, and 1933 is shown in Table VII.

Table VII

<u>NUMBER OF WAGE-EARNERS</u>	
<u>Year</u>	<u>Number of Wage Earners ^{a/}</u>
1929	12,353
1931	10,095
1933	7,907

Source: Census of Manufacturers, "Photo-Engraving, Not Done in Printing Establishments."

a/ Average for the year

The number of wage earners was reported in the Code Application for the years 1928, 1930, 1932, and 1933. For purposes of comparison with Census data, the figures, are given in Table VIII for the years specified. It will be noted that for 1933, the only year covered in both tables, the figures are not in agreement. As already pointed out, the Census data are less inclusive than those pertaining to the Industry as defined by the Code, but here, contrary to the usual situation, the Code Application figure is smaller than the Census figure. The definition of "wage earner" may differ as between the two sources; and the Code Application figure should undoubtedly be considered as an estimate only. Its reliability may be questioned, particularly in view of the fact that Code Application figures show an increase of 4 per cent in the number of concerns between 1932 and 1933 (see Table I) but a decrease in the number of wage earners of 12 per cent.

Table VIII
NUMBER OF WAGE-EARNERS

<u>Year</u>	<u>Number of Wage-Earners</u>
1928	10,173
1930	9,500
1932	8,600
1933	7,600

Source: NRA Code Application

Wages

The total annual wages paid by the industry during the years 1929, 1931, and 1933 are shown in Table IX.

Table IX

TOTAL ANNUAL WAGES

Year	Total Wages
1929	\$51,851,000
1931	24,990,000
1933	14,788,000

Source: Census of Manufactures, "Photo-Engraving, Not Done in Printing Establishments."

Wage Earners and Wages, By State

The total number of wage earners together with the total annual wages paid by the industry are given by states in Table X, for the years 1929, 1931, and 1933.

Table X

NUMBER OF WAGE-EARNERS ^{a/} AND TOTAL ANNUAL WAGES PAID, BY STATES

State	1929		1931		1933	
	Number of Wage Earners	Total Annual Wages (000's)	Number of Wage Earners	Total Annual Wages (000's)	Number of Wage Earners	Total Annual Wages (000's)
U. S. Total	12,353	\$31,831	10,095	\$24,990	7,907	\$14,738
California	558	1,373	476	1,113	389	712
Connecticut	140	300	126	409	197	335
Dist. of Columbia	90	235	87	205	63	146
Georgia	125	282	90	159	66	103
Illinois	2,173	5,706	1,706	3,962	1,449	2,369
Indiana	282	665	151	395	131	229
Iowa	86	199	87	215	70	110
Kentucky	116	193	149	243	113	156
Maryland	127	334	92	227	64	113
Massachusetts	679	1,550	583	1,228	396	654
Michigan	696	1,548	544	1,205	343	533
Minnesota	230	454	217	461	173	226
Missouri	466	1,121	317	749	272	489
New Jersey	218	547	168	450	76	180
New York	3,191	9,534	2,659	7,793	2,112	5,052
Ohio	1,020	2,479	785	1,787	613	989
Pennsylvania	959	2,615	861	2,232	642	1,287
Tennessee	76	176	47	113	55	91
Texas	127	316	115	271	80	118
Virginia	68	144	51	107	52	83
Washington	92	214	52	124	51	71
Wisconsin	317	759	239	549	169	249
Other States	517	1,037	433	908	321	490

Source: Census of Manufactures, "Photo-Engraving, Not Done in Printing Establishments."^{a/} Average for the year.

Wage Rates and Hours Worked

A study of 423 establishments made in April 1934 showed the average hourly and weekly wage, and the number of hours worked per week to have as follows:

Table XI
AVERAGE HOURLY WAGE, AVERAGE WEEKLY WAGE, AND AVERAGE
HOURS PER WEEK, 423 ESTABLISHMENTS, APRIL, 1934

Average Hourly Wage	\$1.27
Average Weekly Wage	45.73
Average Hours Per Wk.	35.7

Source: American Photo-Engravers Association, Photo-Engravers Bulletin, April 1934, Page 46

Union Wage

The rate of pay in the Photo-Engraving Industry is higher than in any of the other Graphic Arts Industries. This is accounted for in part by the high degree of skill required of the worker and in part by the limited number of those qualified for this type of work. Skilled workers in the Industry are rather highly unionized and are, therefore, able to command high rates of pay, as will be seen in Table XII.

Table XII
AVERAGE MINIMUM WEEKLY WAGE FOR PHOTO-ENGRAVERS AS
SPECIFIED IN LOCAL UNION AGREEMENTS, 1930-1934

Year	Commercial Shops	
	Day Work (Average of 43 Identical Cities)	Night Work (Average of 36 Identical Cities)
1930	\$ 54.81	\$ 61.04
1931	54.66	61.14
1932	53.97	60.34
1933	54.13	60.24
1934	53.59	60.10

Source: Photo-Engravers Association, Photo-Engravers Bulletin, September issues of the years covered.

Labor Cost

The labor cost in the process of production is approximately 40 per cent of the value of the products, as will be seen in Table XIII.

Table XIII
VALUE OF PRODUCT AND LABOR COST

Year	Value of Product	Labor Cost	
		Amount	Per Cent of Value of Products
1929	\$77,382,000	\$31,831,000	41.1
1931	56,020,000	24,390,000	44.6
1933	37,583,000	14,768,000	39.3

Source: Census of Manufactures, "Photo-Engraving, Not Done in Printing Establishments."

CHAPTER III

MATERIALS, RAW AND SEMI-PROCESSED

More than 30 different materials are used in the process of producing plates for various types of photo-engraving, most of which are chemicals. Among these are copper, zinc, glass, wood, cameras, photographic plates, ink, dyes, resin, glue, and several acids.

Cost of Materials

Except for the year 1929, the Census Bureau combines the cost of materials with fuel and purchased electric energy. The following table shows that the cost of materials, fuel, and purchased electric energy is approximately 14 per cent of the total value of products.

Table XIV

VALUE OF PRODUCT AND COST OF MATERIALS, FUEL, AND PURCHASED ELECTRIC ENERGY

Year	Total Value of Products	Amount	Cost of Materials, Fuel, and Purchased Electric Energy
			Per Cent of Value of Products
1929	\$77,382,000	\$11,003,000	14.2 <u>a/</u>
1931	56,020,000	7,408,000	13.2
1933	37,583,000	5,602,000	14.9

Source: Census of Manufactures, "Photo-Engraving, Not Done in Printing Establishments."

a/ In 1929 materials alone represented 13.1 per cent of the total value of products.

The cost of materials, by principal producing states, for 1933 is shown in the following table.

Table XV

COST OF MATERIALS, FUEL, AND PURCHASED
ELECTRIC ENERGY, BY PRINCIPAL STATES, 1933

State	Cost of Material, Fuel, and Purchased Electric Energy 1933
<hr/>	
U. S. Total	\$5,601,528
California	295,138
Colorado	28,113
Connecticut	87,283
District of Columbia	43,724
Georgia	33,552
Illinois	1,289,291
Indiana	65,344
Kentucky	144,624
Massachusetts	164,780
Michigan	327,242
Minnesota	73,880
Missouri	99,589
New Jersey	44,696
New York	1,856,466
Ohio	296,743
Pennsylvania	300,266
Tennessee	36,243
Texas	47,617
Virginia	28,744
Washington	30,500
Wisconsin	92,142
Other States	215,551

Source: Census of Manufactures, "Photo-Engraving, Not
Done in Printing Establishments."

CHAPTER IV

PRODUCTION AND DISTRIBUTION

The total value of products of the Photo-Engraving Industry by States, for the years 1929, 1931, and 1933 is shown in the table below.

Table XVI

VALUE OF PRODUCTS, BY STATES a/

(In Thousands)

State	1929	1931	1933
U. S. Total	\$77,382	\$56,020	\$37,583
California	3,703	3,235	2,062
Connecticut	967	961	803
District of Columbia	546	516	389
Georgia	756	398	308
Illinois	14,540	9,286	6,534
Indiana	1,497	882	619
Iowa	558	514	250
Kentucky	630	610	468
Maryland	855	527	294
Massachusetts	3,436	2,519	1,582
Michigan	4,331	3,010	1,730
Minnesota	1,263	1,077	601
Missouri	3,158	1,651	1,117
New Jersey	1,273	932	305
New York	20,773	16,083	12,001
Ohio	5,898	4,084	2,486
Pennsylvania	6,077	4,583	2,904
Texas	944	687	424
Washington	624	430	264
Wisconsin	1,712	1,127	647
Other States	3,941	2,908	1,795

Source: Census of Manufactures, "Photo-Engraving, Not Done in Printing Establishments.

a/ Does not include the products of plants with an output valued at less than \$5,000.

Interstate Shipment of Products

There are no data available to show either the value or volume of products of the Photo-Engraving Industry shipped across state lines during the period under consideration. It seems a safe inference, however, that a considerable portion of the business of the Industry is interstate, since large centers of production such as New York City and Chicago are located near state lines, and since they supply firms throughout both the metropolitan and the trading area.

Methods of Distribution

Photo-Engraved plates are made to special order under a definite agreement or contract and are, therefore, as a rule, sold direct to the customer or consumer.

Exports

There is no appreciable foreign market for products of the Photo-Engraving Industry.

Advertising Media

The advertising media used by the industry are the trade publications whose circulation reaches customers and prospective purchasers of Photo-Engraved plates.

Changes in Centers of Production

There has been no marked shift in the centers of production in the Photo-Engraving Industry during the years 1929 to 1935.

CHAPTER V

TRADE PRACTICES

Unfair Trade practices in the Photo-Engraving Industry arise primarily from competition within the Industry rather than from competition with other industries. The most prevalent unfair trade practice both before and since the adoption of the Code had to do with chiseling on prices, which took various forms. 1/ The unfair trade practices which the Code sought to eliminate were outlined in the Code as follows:

1. Estimates by one photo-engraver upon the work of another for purposes of a check estimate without "all copies and specifications involved in the original order."
2. Successful competitive bidding for orders without making known, upon the request of the unsuccessful bidder, the conditions under which the orders were obtained.
3. The granting of large cash discounts.
4. "The secret payment or allowance of rebates" or their equivalent and the unequal treatment of purchasers.
5. Commercial bribery, that is, the rewarding of an employee or agent of one member of the industry by another member "in relation to the business of the employer of such employee."
6. Offers to supply any product of the photo-engraving industry gratis or "below cost to influence the sale of other products or services."
7. Offers of other products or services gratis or below cost to influence the sale of any product of the Photo-Engraving Industry.
8. "Inducing breach of contracts or agreements," and resorting to other practices designed to injure a competitor.
9. The publishing of inaccurate or misleading advertising in any form, and the misrepresentation of any goods, services, or policies of the member of the industry involved.
10. The insertion in any quotation or invoice of any statement "inaccurate in any material particular."
11. The attempt by a member of the industry to "induce the breach of an existing contract between a competitor and his employee or customer or source of supply."
12. The wilful defamation of competitors or the disparagement of their products, and policies.

1/ See report of cost accountant, approved by Edward G. McKinley, C.O.A., to Anna M. Rosenberg, Acting State Compliance Director, NRA, 45 Broadway, New York City, October 17, 1934.

CHAPTER VI

THE INDUSTRY - GENERAL INFORMATION

As indicated in the introduction to this report, photo-engraving as a practical commercial product had its inception about a half century ago. It appears to have developed on a larger scale in America than elsewhere.

Trade Association

The American Photo-Engraver's Association, the trade association of the Photo-Engraving Industry, organized in 1897, has had a continuous history of almost 38 years. It is composed of over 500 of the approximately 800 members of the Industry in the United States, and its members do approximately 90 per cent of the total volume of business of the Industry.

This trade association not only cooperates with its members but supplies information from time to time to members of the Industry who are not members of the association and seeks their cooperation in matters pertaining to the welfare of the Industry as a whole.

Labor Relations

The relationship between labor and management in the Industry appears to be amicable in the main as a result of policies of conciliation pursued over a period of years. More than 90 per cent of the labor employed by the Industry is unionized and consequently the rates of pay are set by mutual agreement between the management and the union involved, except in open shops.

Labor Union

The majority of skilled workers in this Industry are members of the International Photo-Engravers' Union of North America. Local units of this union are found in all the leading cities of the United States. The International, according to Mr. Edward J. Volz, its President, had a membership in September 1933 of approximately 9,500 journeymen and apprentices, against about 850 journeymen and apprentices outside of the union.

Financial Condition

The financial condition of the Industry appears to be relatively good, in spite of the fact that sales declined in value more than 50 per cent between 1929 and 1933. The capitalization has remained approximately the same. Statistics as to total net profit are not available. However, according to a study made by the trade association in 1926, covering 188 shops, profits in that year constituted 6.1 per cent of sales. A similar study in 1933, covering 396 shops, indicated that profits had declined to .5 per cent of sales. 1/

1/ Source: American Photo-Engravers Association, Photo-Engravers' Bulletin, April, 1934, Page 46.

Effect of Code

While it is difficult, on account of the lack of adequate data, to determine the full effect of the Code of Fair Competition upon the Industry, the statistical tables following ^{1/} would seem to give some indication as to the immediate effect. In the absence of statistics covering a longer period of code operation, those found in these tables should be relied upon for "pointer readings" only, to borrow a phrase from Sir Arthur Eddington, and too sweeping conclusions should not be drawn from them as to the ultimate effect of the Code.

With the exception of Table XII, which gives the employment status of journeymen on June 1, 1934, in comparison with June 1, 1933, the tables embody statistics only for December 15, 1933, approximately two weeks before the effective date of the Code; January 15, 1934, two weeks after the Code went into effect; and, for purposes of comparison, similar statistics for January 15, 1933.

Employment.— Data on the change in employment between the three periods are given in Table XVII. That there was no appreciable change in the number of journeymen or apprentices employed immediately after the Code went into effect is probably attributable to the fact that the unions had already reduced the hours to 40 a week, the Code maximum, in the majority of establishments.

^{1/} These statistics are taken from a report prepared by the statistical department of the American Photo-Engravers Association, covering the firms reporting on the items under consideration and reprinted in the Photo-Engravers Bulletin of April 1934, under the title: "The Effect of Our Code."

Table XVII

NUMBER OF EMPLOYEES IN 621 PHOTO-ENGRAVING ESTABLISHMENTS
BY PRINCIPAL CLASSES, FOR SPECIFIED DATES

Date	Number	Total			Journeyman			Apprentices			Other Employees		
		Per Cent	Change From Preceding Period	Number	Per Cent	Change From Preceding Period	Number	Per Cent	Change From Preceding Period	Number	Per Cent	Change From Preceding Period	Number
Jan. 15, 1933	9,236	-		4,728	-		764	-		3,744	-		-
Dec. 15, 1933	9,755	+5.9		5,251	+11.1		705	-7.7		3,329	+2.3		
Jan. 15, 1934	9,943	+1.6		5,293	+ .8		686	-2.7		3,564	+3.5		

Source: American Photo-Engravers Association, The Photo-Engravers Bulletin, April 1934, Page 30.

Payrolls and Wages. - It will be seen from Table XVIII, that there was a slight decline in the average weekly wage, that is, for all employees combined, immediately after the adoption of the Code, which can no doubt be explained by the reduction in the number of hours worked by a considerable number of employees in the industry.

Table XVIII

TOTAL WEEKLY PAYROLL AND AVERAGE WEEKLY WAGE IN
621 ESTABLISHMENTS FOR SPECIFIED DATES

Date	Total Weekly Payroll		Average Weekly Wage (All Employees)	
	Amount	Per Cent Change From Preceding Period	Amount	Per Cent Change From Preceding Period
Jan. 15, 1933	\$402,001	-	\$ 43.52	-
Dec. 15, 1933	436,271	+9.0	44.79	+2.9
Jan. 15, 1934	442,005	+0.9	44.26	-1.2

Source: American Photo-Engravers Association, Photo-Engravers Bulletin, April 1934, Page 10

Employment Status of Union Journeymen. - The number of union journeymen employed full time almost double, according to the data shown below, between June 1, 1933 and June 1, 1934. However, the exact percentage increase which came during the five months after the Code actually went into effect can not be determined from the available data.

Table XIX

STATUS OF EMPLOYMENT OF UNION JOURNEMEN,
JUNE 1, 1933 AND JUNE 1, 1934

	Total Journeymen		Employed Full Time		Employed Part Time		Unemployed	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
June 1, 1933	8,521	100.0	1,649	21.7	3,527	41.4	3,143	36.9
June 1, 1934	8,505	100.0	3,407	40.0	2,826	33.3	2,199	25.9

Source: American Photo-Engravers Association, Photo-Engravers Bulletin, September 1934, Page 45

Value of Sales. - The average value of sales per establishment increased .7 per cent between December 1933 and January 1934, but it is not known whether this was an acceleration or slackening of the rate of increase, since data for the months between January 1933 and December 1933 are not available.

Table XII

TOTAL SALES AND AVERAGE SALES PER ESTABLISHMENT
FOR SPECIFIED MONTHS

Month	Number of Establishments Reporting	Total Sales Amount	Average Sales Per Establishment	
			Per Cent Change From Preced- ing Period	
Jan. 1933	533	\$2,113,735	\$4,003	
Dec. 1933	533	2,603,321	4,603	+ 13.0
Jan. 1934	613	2,372,203	4,653	+ 0.7

Source: American Photo-Engravers Association, Photo-Engravers Bulletin, April 1934, page 31

Price Changes.- The following table indicates that a considerable portion of the Industry's members increased their prices immediately after the Code went into effect on January 1, 1934.

Table XIII

SHOPS CLASSIFIED ACCORDING TO PRICE CHANGES
IN JANUARY 1934 AS COMPARED WITH DECEMBER 1933

Kind of Change	Shops	
	Number	Per Cent of Total
Changing higher prices	384	65.4
Changing lower prices	63	11.6
No change in prices	173	23.0
Total Reporting	567	100.0

Source: American Photo-Engravers Association, Photo-Engravers Bulletin, April 1934, Page 31

Table XXII, which supplements the above table, shows the increase in prices as indicated by changes in the discounts from scale. The "scale" is a standard price list in wide use throughout the Industry. A decrease in the discount from this scale amounts to an increase in price.

Table XXII

SHOPS CLASSIFIED ACCORDING TO AMOUNT OF DECREASE IN
DISCOUNT FROM SCALE, IN JANUARY 1934 AS COMPARED
WITH DECEMBER 1933

Per Cent Decrease in Discount From Scale	Number of Shops Reporting	Per Cent of Total Shops Reporting
0 - 4.9	168	44.6
5.0 - 9.9	97	25.8
10.0 -14.9	59	15.7
15.0 -19.9	27	7.2
20.0 -24.9	16	4.3
Over 25.0	9	2.5
	376	100.0

Source: American Photo-Engravers Association, Photo-Engravers Bulletin, April 1934, Page 32.

From these statistics it would appear that no large increases in prices were made by any considerable number of the members of the Industry as a result of the adoption of the Code.

Summary.— In general, the Code seems to have affected small establishments less than large ones. According to the statistical report of the American Photo-Engravers' Association referred to above, "The data with regard to small establishments indicate that the small shops have not increased employment to the same extent as large shops; have not increased payrolls proportionately to the increase in larger establishments and have not enjoyed as great an increase in sales. It would therefore seem that Code operation has not injured the smaller enterprises but, on the contrary, has given them a certain amount of advantage over their larger competitors."^{1/}

A further appraisal of the effect of the Code upon the Industry is to be found in the "Annual Reports of Officers" of the American Photo-Engravers' Association. The following excerpt from these reports, reprinted in the Photo-Engravers Bulletin,^{2/} is significant since it is regarded as expressing the opinion of the national association: "The past year witnessed fewer

^{1/} From the Photo-Engravers Bulletin, April 1934, Page 33.

^{2/} September 1934, Page 43.

changes in plants, ownership and management than experienced since the business breakdown in 1929. This can most likely be attributed to the stabilizing effect of the Code of Fair Competition for the Photo-Engraving Industry and improved business conditions."

Trade-Marks

While trade-marks are used in the Photo-Engraving Industry, they are not so essential to this Industry as to many others, since practically all of its business is done to the special order of a given customer. However, Article IX, Section 9 of the Code of Fair Competition undertakes to protect the trade-mark of each member of the Industry against use by another member. As a rule, the printing plates manufactured by members of the Industry are of no practical use to anyone except the person or firm for whom they were made and any attempt at piracy of trade-marks could easily be traced.

Foreign Competition

The Photo-Engraving Industry has no competition to speak of from the foreign market.

Experts in the Industry

Among those most familiar with conditions in the Industry is Mr. Louis Flader, Executive Secretary, Code Authority for the Photo-Engraving Industry, 166 West Van Buren Street, Chicago, Illinois, who can qualify as an expert. He has been connected with the Industry for a number of years in an executive capacity and is the author of a book entitled, The Art of Photo-Engraving.

